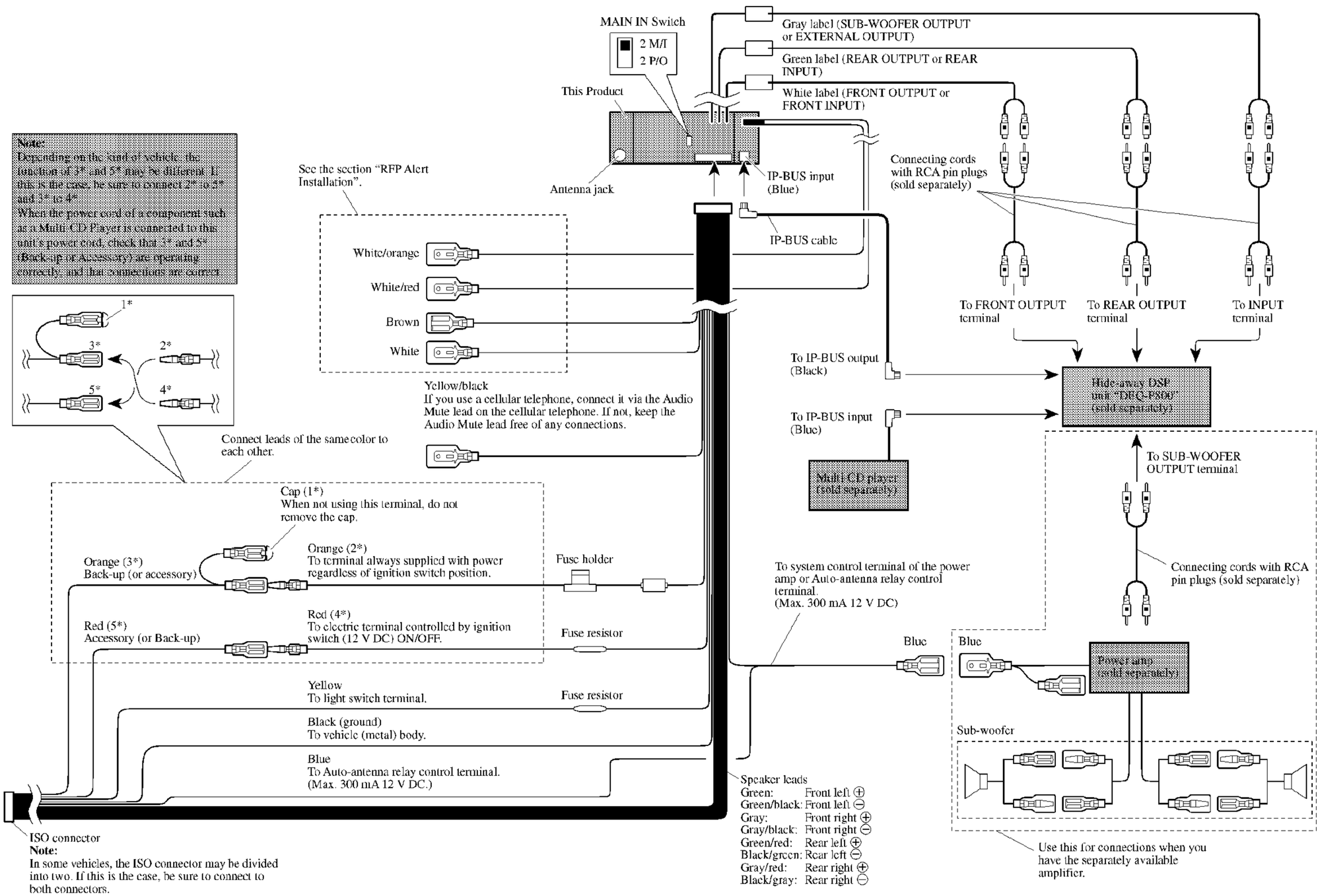
PIONEER KEH-P8600

MODEL

SERVICE MANUAL


MAIN IN Switch
2 M/I
2 P/O
This Product
Antenna jack
Gray label (SUB-WOOFER OUTPUT or EXTERNAL OUTPUT)
Green label (REAR OUTPUT or REAR INPUT)
White label (FRONT OUTPUT or FRONT INPUT)
IP-BUS input (Blue)
IP-BUS cable
Connecting cords with RCA pin plugs (sold separately)
To FRONT OUTPUT terminal
To REAR OUTPUT terminal
To INPUT terminal
Note:
Depending on the kind of vehicle, the function of 3* and 5* may be different. If this is the case, be sure to connect 2* to 5* and 3* to 4*.
When the power cord of a component such as a Multi CD Player is connected to this unit's power cord, check that 3* and 5* (Back-up or Accessory) are operating correctly, and that connections are correct.
1*
2*
3*
4*
5*
See the section "RFP Alert Installation".
White/orange
White/red
Brown
White
Yellow/black
If you use a cellular telephone, connect it via the Audio Mute lead on the cellular telephone. If not, keep the Audio Mute lead free of any connections.
To IP-BUS output (Black)
To IP-BUS input (Blue)
Hide-away DSP unit "DEQ-P800" (sold separately)
Multi CD player (sold separately)
To SUB-WOOFER OUTPUT terminal
Connecting cords with RCA pin plugs (sold separately)
Connect leads of the same color to each other.
Cap (1*)
When not using this terminal, do not remove the cap.
Orange (3*)
Back-up (or accessory)
Orange (2*)
To terminal always supplied with power regardless of ignition switch position.
Fuse holder
Red (5*)
Accessory (or Back-up)
Red (4*)
To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
Fuse resistor
Yellow
To light switch terminal.
Fuse resistor
Black (ground)
To vehicle (metal) body.
Blue
To Auto-antenna relay control terminal.
(Max. 300 mA 12 V DC.)
To system control terminal of the power amp or Auto-antenna relay control terminal.
(Max. 300 mA 12 V DC)
Blue
Blue
Power amp (sold separately)
Sub-woofer
Speaker leads
Green: Front left ⊕
Green/black: Front left ⊖
Gray: Front right ⊕
Gray/black: Front right ⊖
Green/red: Rear left ⊕
Black/green: Rear left ⊖
Gray/red: Rear right ⊕
Black/gray: Rear right ⊖
Use this for connections when you have the separately available amplifier.
ISO connector
Note:
In some vehicles, the ISO connector may be divided into two. If this is the case, be sure to connect to both connectors.

Connecting the Units <ENGLISH>

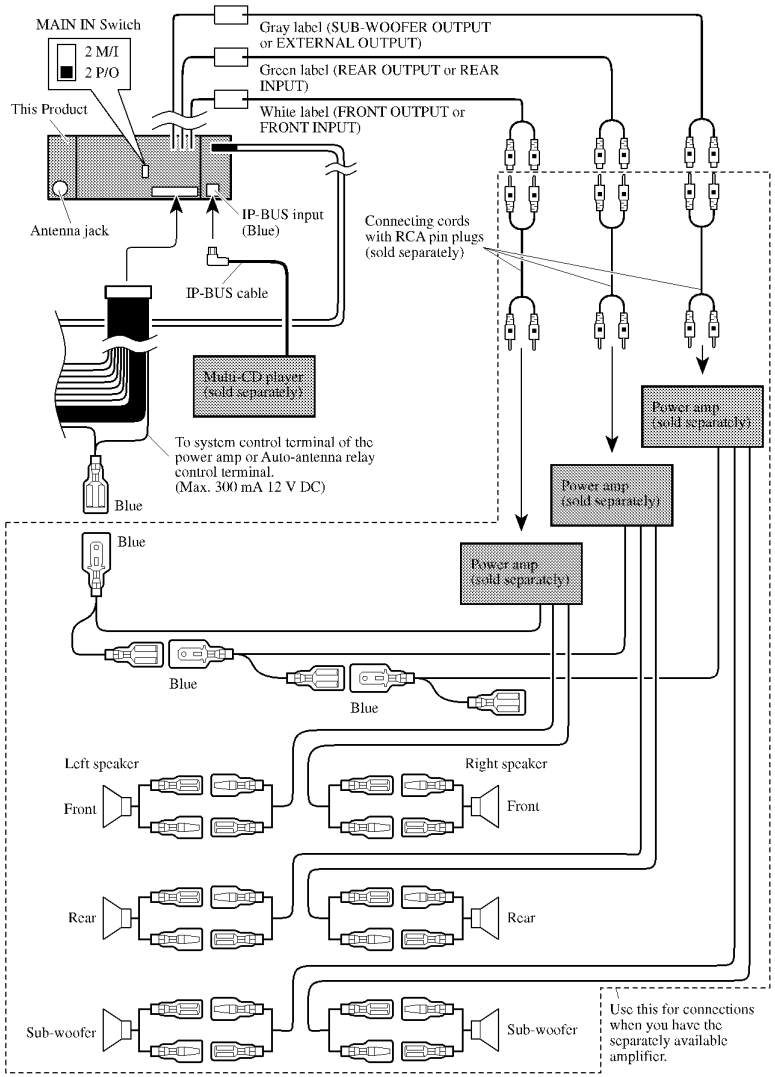
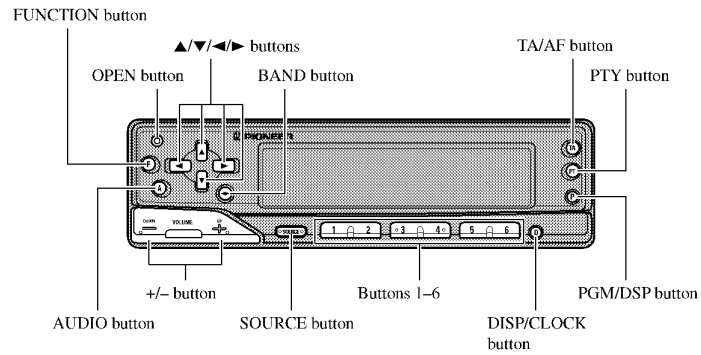


Fig. 34

Key Finder

■ Head Unit



■ Remote Controller

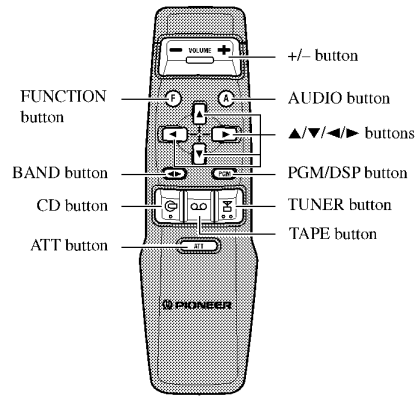


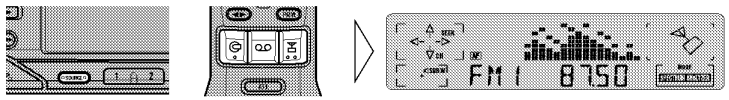
Fig. 35

KEH-P8600R,P7600R

Basic Operation

Switching Power ON/OFF

- **Select the desired source (such as the tuner).**



■ Head Unit

Each press of the SOURCE button selects the desired source in the following order:
Tuner → Tape → Multi-CD player → AUX

To switch the sources OFF, hold down the SOURCE button for 1 second or more.

■ Remote Controller

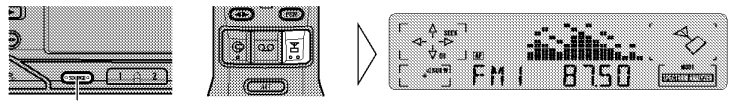
Each press of the button selects the desired source in the following order:
TUNER button : Tuner → OFF
TAPE button : Tape → OFF
CD button : Multi-CD player → OFF

Note:
- In the following cases, the sound source will not change:
  * No Multi-CD player is connected to this product.
  * No cassette tape is set in this product.
  * No magazine is set in the Multi-CD player.
  * AUX (external input) is set to OFF.

Tuner Operation

Basic Operation of Tuner

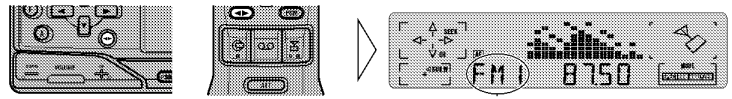
1. **Select Tuner.**



Each press
changes the Source ...

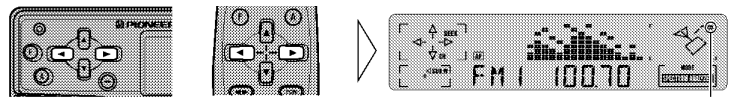
The program service name or frequency appears on the display.

2. **Select the desired band.**



FM1 → FM2 → FM3 → MW/LW

3. **Tune the receiver to a higher or lower frequency.**



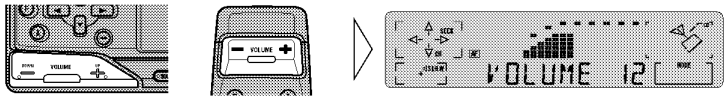
"◯"

This product's tuner lets you select the tuning by changing the length of the time you press the button.

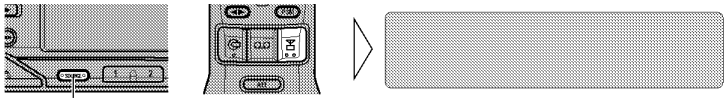
Manual Tuning (step by step)	0.3 seconds or less
Seek Tuning (automatically)	0.3 – 2 seconds
Manual Tuning (continuously)	2 seconds or more

Note:
- "◯" indicator lights when a stereo station is selected.
- To select a weak broadcasting station that cannot be tuned in with the Seek Tuning function, tune in with Manual Tuning.

4. **Raise or lower the volume.**



5. **Turn the source OFF.**

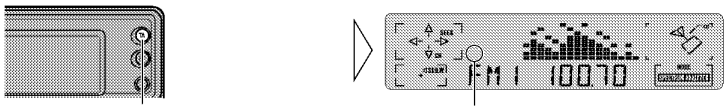


Hold for 1 second

AF Function Switching

This product's AF function can be switched ON and OFF. AF should be switched OFF for normal tuning operations.

- **Switch AF OFF.**



Hold for 2 seconds

"AF" disappears

To switch AF ON, repeat the preceding operation.

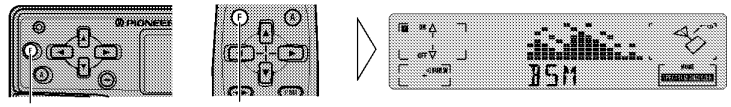
Note:

- You can also switch the AF Function ON/OFF in the Function Menu.

Entering the Function Menu

In this menu you can select tuner functions.

- **Select the desired mode in the Function Menu.**



Each press changes the Mode ...

Each press changes the Mode ...

Each press of the FUNCTION button selects the mode in the following order:

BSM → REG* → LOCAL → TA* → PTY SEL* → AF*

* REG, TA, PTY SEL and AF are RDS functions for FM bands. You cannot switch to these modes when selecting MW or LW band. Refer to "Using the RDS Functions" for details and instructions on how to use these functions.

To cancel the Function Menu, press the BAND button.

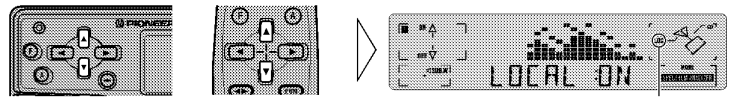
Note:

- After entering the Function Menu, if you do not perform an operation within about 30 seconds, the Function Menu is automatically canceled.

Local Seek Tuning

This mode selects only stations with especially strong signals.

1. **Select the Local mode (LOCAL) in the Function Menu.**
2. **Switch the Local mode ON or OFF.**



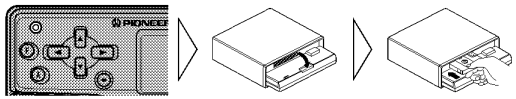
"LOC"

To cancel the Function Menu, press the BAND button.

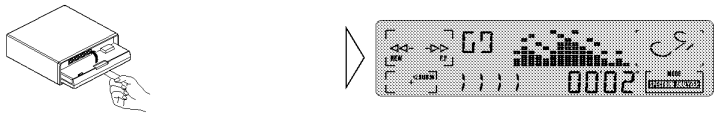
Using the Cassette Player

Basic Operation of Cassette Player

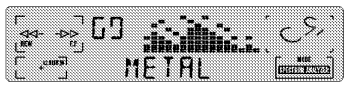
1. **Open the front panel and insert the cassette tape.**



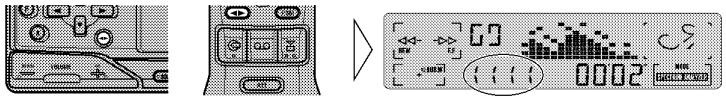
2. **Close the front panel by swinging it gently upward.**



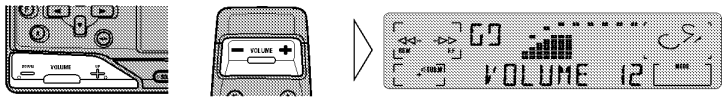
"METAL" appears on the display for 2 seconds when a metal or chrome tape is inserted. Nothing is displayed for a normal tape.



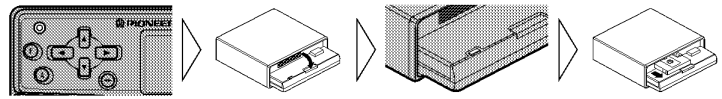
3. **Switch tape playback from side A to side B, or vice versa.**



4. **Raise or lower the volume.**



5. **Open the front panel and remove the cassette tape.**



Be sure to close the front panel after removing the cassette tape.

Note:
- The Tape function can only be turned ON/OFF with the cassette tape remaining in this product. (See page 64.)

■ Continuous Playback Time

During tape playback, the continuous playback time is displayed.
- The continuous playback time count starts at 00'00" at the following times.
  * When a tape is inserted.
  * When the tape direction is changed.
  * When you rewind the tape side currently playing back to the beginning.
- The continuous playback time count is halted at the following times.
  * When the power is turned OFF.
  * When you switch to another source.
  * When fast-forwarding/rewinding and while the Music Search function is operating.

Fast Forward/Rewind and Music Search

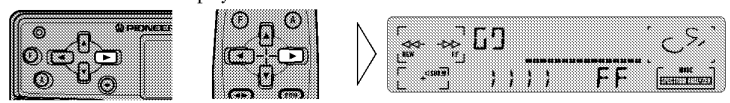
■ Fast Forward and Forward-Music Search

While "FF" is displayed, the system fast-forwards the cassette tape to the end of the current side.

While "F-MS" is displayed, the system winds the cassette tape forward to the beginning of the next song, then play begins from that point.

- **Select the desired mode in the following order:**

FF → F-MS → Normal playback

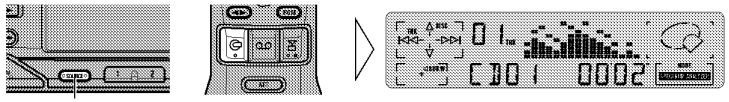


Note:
- Fast Forward (FF) and Forward-Music Search (F-MS) can be canceled by pressing the BAND button during FF or F-MS operation.

This product can control one or more multi-CD players.

Basic Operation of Multi-CD Players

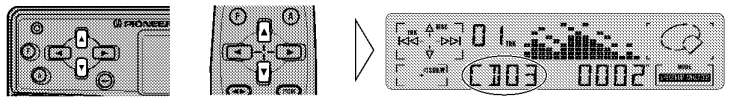
1. Select the multi-CD player source.



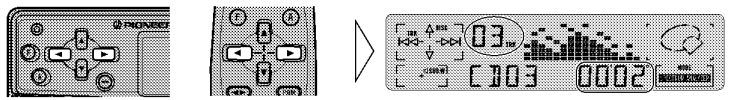
Each press
changes the Source ...

Note:
- The multi-CD player may perform a preparatory operation, such as verifying the presence of a disc or reading disc information, when the power is turned ON or a new disc is selected for playback. "READY" is displayed.
- If the multi-CD player cannot operate properly, an error message such as "ERROR-14" is displayed. Refer to the multi-CD player owner's manual.
- If there are no discs in the multi-CD player magazine, "NO DISC" is displayed.

2. Select the desired disc.



3. Select the desired track (or fast-forward/reverse, per the chart below).

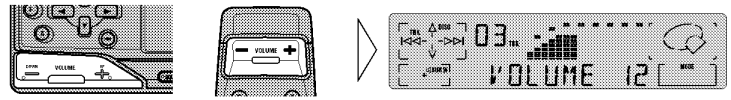


This product lets you select the track search function or fast-forward/reverse function by changing the length of the time you press the button.

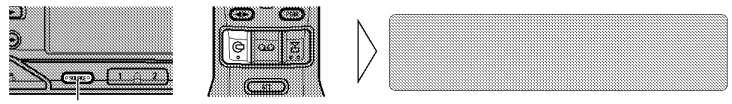
Track search	0.5 seconds or less
Fast-forward/Reverse	Continue pressing

Using Multi-CD Players

4. Raise or lower the volume.



5. Turn the source OFF.



Hold for 1 second

Playing Discs on a 50-Disc Type Multi-CD Player

When a magazine is loaded into a 50-Disc type multi-CD player, information on all the discs in the magazine is read.

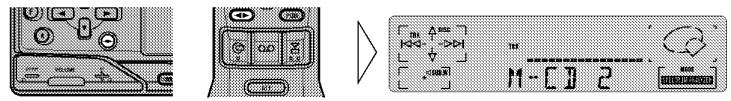
If you start playing a disc on a 50-Disc type multi-CD player before reading of information on all discs has been completed, reading of information stops part way through. This will prevent you from using a number of functions. (If you try and use these functions, "NOT READY" is displayed.)

If this happens, reading of information begins again when you switch to a component other than 50-Disc type multi-CD player.

Switching the Multi-CD Player

It is possible to connect up to three multi-CD players by means of a multiple installation adapter. When two or more multi-CD players are installed, their priorities must be specified. Follow the multi-CD player instructions carefully, and set the address switches properly.

- **Select the multi-CD player you want to use.**

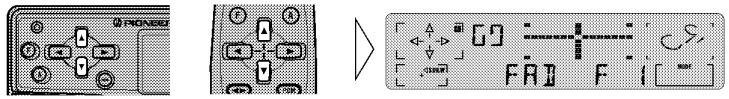


M-CD 1 → M-CD 2 → M-CD 3

Balance Adjustment

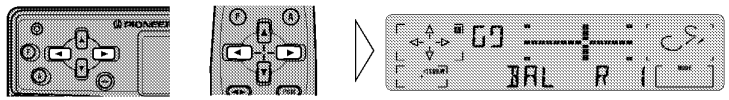
This function allows you to select a Fader/Balance setting that provides ideal listening conditions in all occupied seats.

1. **Select the Fader/Balance mode (FAD) in the Audio Menu.**
2. **Shift the balance progressively to the front or rear speakers.**



"FAD F15" – "FAD R15" is displayed as it moves from front to rear.
("FAD F9" – "FAD R9" is displayed as it moves from front to rear when a Hide-away DSP "DEQ-P800" is connected to this product.)

3. **Shift the balance to the left or right speaker, respectively.**



"BAL L9" – "BAL R9" is displayed as it moves from left to right.

To cancel the Audio Menu, press the BAND button.

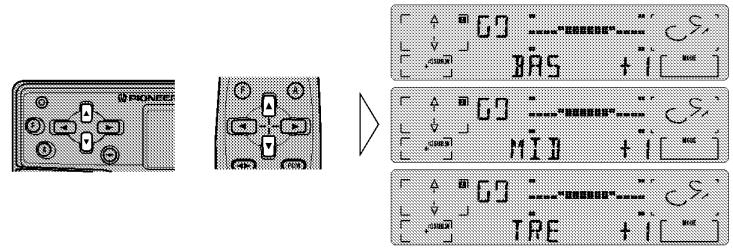
Note:
- "FAD 0" is the proper setting when 2 speakers are in use.
- You cannot shift the balance progressively to the front or rear speakers when a DSP (except the Hide-away DSP) is connected to this product.

Audio Adjustment

Bass/Middle/Treble Adjustment

This product is equipped with three tone adjustment modes, the Bass (BAS), Middle (MID) and Treble (TRE) modes. It is possible to select a different tone adjustment setting for each source.

1. **Select bass mode (BAS), middle mode (MID) or treble mode (TRE) in the Audio Menu.**
2. **Increase or decrease the intensity of the Bass, Middle or Treble, whichever is selected.**



The display shows "+6" – "–6".

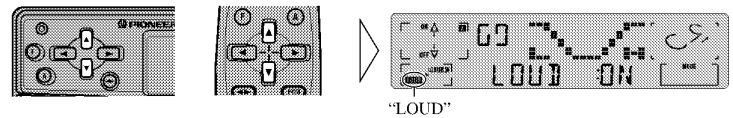
3. **Repeat steps 1–2 above for the other Bass, Middle or Treble Adjustment.**

To cancel the Audio Menu, press the BAND button.

Loudness Adjustment

The Loudness function compensates for deficiencies in the low and high sound ranges at low volume.

1. **Select the Loudness mode (LOUD) in the Audio Menu.**
2. **Switch the Loudness function ON or OFF.**



To cancel the Audio Menu, press the BAND button.

Specifications

General

Power source ..... 14.4 V DC (10.8 – 15.1 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 10 A
Dimensions
(mounting size) .... 178 (W) × 50 (H) × 150 (D) mm
(front face) ..... 188 (W) × 58 (H) × 19 (D) mm
Weight ..... 1.5 kg

Amplifier

Maximum power output ..... 40 W × 4
Continuous power output ..... 25 W × 4
(DIN45324, +B = 14.4 V)
Load impedance ..... 4 Ω (4 – 8 Ω allowable)
Preout output level/output impedance ..... 500 mV/1 kΩ
Sub-woofer output
Crossover frequency ..... 50 Hz, 80 Hz, 125 Hz
Crossover slope ..... –18 dB/oct
Tone controls
(Bass) ..... ±12 dB (80 Hz)
(Middle) ..... ±12 dB (400 Hz)
(Treble) ..... ±12 dB (10 kHz)
Loudness contour ..... +10 dB (100 Hz), +7 dB (10 kHz)
(volume: –30 dB)

Cassette player

Tape ..... Compact cassette tape (C-30 – C-90)
Tape speed .... 4.76 cm/sec. (+0.14 cm/sec. –0.05 cm/sec.)
Fast forward/rewinding time .. Approx. 100 sec. for C-60
Wow & flutter ..... 0.09% (WRMS)
Frequency response ..... Metal: 30 – 19,000 Hz (±3 dB)
Stereo separation ..... 45 dB
Signal-to-noise ratio
..... Metal:* Dolby C NR IN: 73 dB (IEC-A network)
Dolby B NR IN: 67 dB (IEC-A network)
Dolby NR OUT: 61 dB (IEC-A network)
* : KEH-P8600R/EW only.

FM tuner

Frequency range ..... 87.5 – 108 MHz
Usable sensitivity
..... 11 dBf (1.0 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity .... 16 dBf (1.7 µV/75 Ω, mono)
Signal-to-noise ratio ..... 70 dB (IEC-A network)
Distortion ..... 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

MW tuner

Frequency range ..... 531 – 1,602 kHz
Usable sensitivity ..... 18 µV (25 dB) (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)

LW tuner

Frequency range ..... 153 – 281 kHz
Usable sensitivity ..... 30 µV (30 dB) (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)

Note:

- Specifications and the design are subject to possible modification without notice due to improvements.

KEH-P8600R,P7600R